

MDT Median Crossovers (Interstate)

Procedures & Guidelines

INTRODUCTION

These procedures and guidelines are to be used in conjunction with the MDT Median Crossover Policy (Interstate). They apply to median crossovers to be built in connection with roadway construction projects on the National Highway System, Interstate Routes. Periodic evaluation of these procedures and guidelines will be performed to assess the effectiveness of the Median Crossover Policy. Changes to the policy and the guidelines will be integrated into the documents as a result of the evaluation.

I. NEED

The need for median crossovers for work zone traffic control will be determined during the project development process. The decision to leave the crossover in place should be made at the plan-in-hand, if not before.

II. DESIGN

Plans

All details necessary to construct the median crossovers will be provided in the plans and described in the Standard Specifications and special provisions.

Location

Crossovers should preferably be located on horizontal and vertical tangents. Where this is impractical, they should be located where adequate stopping sight distance for the design speed of the route is provided.

Crossovers should be located in suitable terrain, where there is minimal difference in the elevation of the opposing lanes. The elevation difference between edges of median shoulders of the opposing lanes should be limited to 3 feet.

Crossovers should be located where the median width is 36 feet or more. Where this width is not available lane closure locations must be adjusted to accommodate the transitions.

The crossover site should be selected so as to not interfere with maintenance turnarounds. If this cannot be accomplished the crossovers can be modified to function as a maintenance turnaround.

Permanent crossovers generally should not be located in close proximity to urban areas.

Taper Rate

A taper rate of 12:1 should be used for the crossover. Sites will be evaluated on a case-by-case basis if constraints make the use of this taper rate impractical.

Surfacing

The surfacing should be designed for at least 25% of the mainline ESALS, but should not be less than 0.30' of plant mix and 0.75' of crushed aggregate course. A seal and cover should be applied to the crossover when it is applied to the mainline.

Drainage

The drainage features should be designed for the same frequency storm event used for the mainline (e.g. 50-year event). The designer will need to ensure that adequate cover is provided over the culverts. RACETS should be provided on all culvert ends.

Where practical, the crossovers should be located adjacent to median drop inlets so that no other drainage facilities are needed.

The crossover should be sloped to prevent an increase in runoff across travel lanes.

Safety considerations

20:1 transverse slopes should be used, and a minimum 15:1 slope can be used where the use of the flatter slope is not feasible due to site conditions.

III. CONSTRUCTION

Installation and Use

The contractor will construct and maintain the crossovers in accordance with the plans and specifications including all necessary temporary traffic control devices.

Closure

The contractor will install pre-stretched, high tension cable rail to close the crossover upon completion of construction.

A crashworthy end treatment should be used on both ends of the rail.

Cover pavement markings with a seal and cover. Apply a seal and cover to the crossover when it is applied to the mainline. If a seal and cover is not placed on the crossover, the pavement markings must be removed prior to the completion of construction.

IV. POST-CONSTRUCTION MAINTENANCE

MDT Maintenance forces will provide normal maintenance for the crossovers. In addition, they will inspect the crossovers to ensure that delineation and other appurtenances necessary to prevent the use of the crossover are in place and in good condition. They will repair or replace signing, delineation and guardrail as necessary.